

## NADAM COTTONS

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**Introduction.** Nadam (*G. obtusifolium*) is a constituent of the group of cottons commercially called 'Salems'. One would infer from the name (nadam = country) that it might have been the cotton in general cultivation prior to the spread of annual cottons like *Uppam* and *Karunganni*. It is generally found in Coimbatore district mixed with an American type of cotton viz., 'Bourbon' (*G. Purpurascens*). Both the types are perennials and stand on the field for more than 4 to 5 years. Bourbon is named after the Isle of that name, where it is supposed to have been introduced by the French from the West Indies. It was first introduced in India during 1820 from Mauritius by Mr. Heath of Messrs. Fischer and Co.

Nadam is a tall shrub about 6 feet high branches arising at acute angles with the stem, with small leaves, yellow flowers, lint of short staple (6/8 to 7/8"), slightly adhering to the boll and strongly attached to the seeds. The ginning percentage is also as low as 23. Compared to this, Bourbon, is definitely better. Bourbon plants are about 3 feet high with large reddish leaves, creamy flowers, naked seeds and white lint definitely longer (nearly an inch) than Nadam separating readily from the bolls necessitating gathering immediately after bursting. This last character of this cotton is said to be one of the reasons for its falling out of favour with the ryots. Its ginning percentage (24-25%) is, however, a little better than that of Nadam.

The poor yield and quality of Nadam lint make it comparatively unimportant, the total area under it being about 37,000 acres. Further scope for its extension is very limited. The soil where it is grown is partly responsible for this. It is grown on red and gravelly soils of a very light and poor nature. These soils are generally classified as 'third class cotton soils' which are too gravelly and receive too little of rainfall to ripen any of the finer races of cotton on them. Cotton is mixed with cereals during the first year of its growth, while catch crops like horse gram are taken in favourable seasons during the second and third year of its life and ryots pay very little attention to the cotton crop. It is interesting to note here that these lands are very important to the ryots as grazing grounds for their cattle which are very important in the economics of the ryots in this tract. It also plays an important part in the house-hold economy of dry-land ryots. These cottons flush on receipt of every shower and facilitate the ryot to have weekly pickings and this quantity, though small, fetches them ready money for their sundry purchases at the weekly *shandies*.

Due to precarious seasons, the Nadam area has been gradually declining during the last 20 years. The Nadam cottons in general come up well only when there is uniform distribution of rainfall. Rains are necessary in summer (April–May) for proper preparatory cultivation, followed by good sowing rains in June–July (South West monsoon). A good precipitation is again essential in September–October (North East monsoon) for timely intercultivation. The average rainfall for the tract is 33.41 inches and if this is well distributed a good harvest is generally obtained.

It will be interesting to mention here in brief the cultivation of these cottons as is practised in Erode taluq of Coimbatore district. On receipt of good rains in *Chitrai–Vykasi* (May–June) preparatory cultivation is commenced by a good ploughing. A second ploughing follows with the receipt of another shower and sometimes even a third to get a good tilth. Manuring is also done occasionally. This consists usually of penning sheep, and occasionally penning cattle also and this is generally done just after the harvest of the previous crop in the month of *Thai* (December–January) the rate being about 1000 sheep per acre. This will be supplemented by 20–30 cartloads of village sweepings and also old earth round about the fences with decomposed leaves. In *Ani–Adi* (June–July) the cotton seed rubbed with lime or *vasambu*\* dust which are supposed to prevent attack of white ant and insects in the soils is broadcast mixed with *cumbu* (*P. typhoidum*). Generally 15 lb. of cotton and 10 lb. of *cumbu* seed form the mixture for sowing an acre. Two-thirds of the quantity is first sown and covered with a country plough, the balance is then broadcasted and covered by cross ploughing. The high seed rate used is due to the property of the soil setting hard immediately after the rains. Intercultivation is very simple. The first intercultivation is given in the form of ploughing 1 to 1½ ft. apart mainly for the *cumbu* crop, when the latter is one and a half months old. A second ploughing is given just after the harvest of the *cumbu* crop in October, which sometimes synchronises with the north-east monsoon. In good seasons when there is rain in December–January a third ploughing is given. The same number of intercultivations are given during the second and third years.

The growth of the cotton is very slow in the initial stages and flowering commences only in March–April and first pickings are taken after 11–12 months. The quantity picked during the first year is very little, the maximum being about 50 lb. only. The actual growth commences only in the second year and with favourable season and timely intercultivation a good harvest is obtained, about 200–250 lb. per acre. About 150–200 lb. is obtained during the 3rd year. But if continued further, the yield will decline rapidly. In certain

\* *Acorus calamus*.

seasons especially during the second and third years, to accelerate branching, pruning is resorted to. It was an important operation during the early years of Nadam cotton cultivation, but it is now very rarely practised by the ryots. Pruning as was practised by Mr. Hughess in the cultivation of Bourbon cotton in India is worthy of notice. He says: "Pruning should be practised twice in the year. The first and most important pruning should take place between the 15th and 31st December, when the shrub is cut down to two feet high and two feet wide; only the firm wood being left with the strong white and brown bark. In January during fine days the plantation should be ploughed thoroughly three or four times. In less than two months the whole of the plants will be again in the finest foliage and full blossom and continue in full bearing throughout the months of March, April and May. Early in June a good many pods still remain and a second pruning should be practised of the long, straggling, twisted soft shoots with diminutive pods. Subsequently from July to September good produce may be obtained." Pruning experiments have been started in the Nadam Cotton Breeding Station at Perundurai and the results are expected to throw much light on the efficacy of pruning for these cottons.

From the observations so far recorded there is no serious disease or pest on these cottons. The only pests are yellow aphis and scale insects. Stem weevil is present, but casualties due to this insect are few. But the affected plants do immense harm indirectly. These cottons being in the field for more than three years, serve as a good breeding and harbouring place for insects, which readily attack other annuals when they are sown. Nadam cottons are the breeding ground for the stem weevil which is a dangerous pest to Cambodia. A pest act was introduced to eradicate serious cotton pests like cotton stem weevil and pink boll worm. The strict observance of this act has failed to control the pests in certain tracts, due to the presence of these cottons. This question has brought in the necessity for the improvement of Nadam, though its commercial importance is not great. Further if the objects of the pest act are to be achieved, the only alternative seems to be to evolve a suitable type of Nadam, which will give all its yield during the first year, or in other words to replace the present perennial Nadam cotton by an annual form. With this idea in view the Indian Central Cotton Committee has sanctioned the Madras Nadam Cotton Breeding Scheme for a period of five years and work on this scheme has been started early in June 1934.

The table below gives the economics of Nadam Cotton cultivation.

	<i>Per acre.</i>
	Rs. A. P.
(1) <i>Preparatory cultivation.</i>	3-0-0
Two ploughings at Rs. 1-8-0.	

	<i>Per acre.</i>
	Rs. A. P.
(2) <i>Manure and Manuring.</i>	
Sheep penning at 1000 sheep.	15-0-0
20-30 cartloads of village sweepings and earth round the fences etc.	5-0-0
Covering manure by ploughing.	1-8-0
(3) <i>Seeds and sowing.</i>	
Broadcasting 15 lb. of cotton seed and 10 lb. of cumbu and covering and ploughing twice.	3-12-0
Cost of 15 lb. of cotton seed and 10 lb. of cumbu.	0-12-0
Cost of horsegram (15 lb.) and sowing etc., during 2nd & 3rd years.	1-8-0
(4) <i>Intercultivation.</i>	
One ploughing with country plough both for cumbu and cotton 1-1½ ft. apart.	1-4-0
Intercultivation of cotton alone 2 to 3 times a year i. e. after every rain.	3-12-0
II year.	3-12-0
III year.	3-12-0
(5) <i>Harvesting.</i>	
Harvesting cumbu and threshing.	3-0-0
Picking cotton (paid in kind) for all the three years.	5-0-0
Harvesting and threshing horse gram.	1-8-0
	Total... 52-8-0

### Value of Produce.

(1) Value of 480 lb. of cumbu at Rs. 7-0-0 per 162 lb. (one salagai).	17-12-0
(2) Value of 300 lb. of horsegram for two years 2nd and 3rd years.	9-12-0
(3) Value of 500 lb. of kappas at Rs. 1-8-0 per 21 lb.	35-12-0
	Total... 63-4-0
	Net profit for 3 years. 10-12-0

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## THE EFFECT OF SULPHUR ON BELLARY SHEEP

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It is well known that sulphur has a beneficial effect on the growth of wool. Considerable work has been done in Australia and elsewhere on the increased production of wool by the inclusion of sulphur in the ration. Bellary sheep on the Hosur Livestock Research Station, has a good conformation and is producing an average wool yield of 2.75 lb. The animals grow very slowly but they are capable of lambing twice a